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HEADQUARTERS:
SILICON VALLEY
[redacted]

SAN FRANCISCO

LOS ANGELES

PHOENIX

ASHEVILLE

BOSTON

8 June 2022

Lilian Abreu
Remedial Project Manager
U.S. Environmental Protection Agency
Region 9
75 Hawthorne Street (SFD-7-1)
San Francisco, CA 94105

RE: Response to EPA Comments Received 19 April 2022 Regarding the Building Specific Work Plan Addendum, 811 East Arques Ave, Sunnyvale, California, 17 March 2022

CERCLIS Site CAD070466479

Dear Ms. Abreu:

This letter is submitted on behalf of Philips Semiconductors Inc (Philips) in response to the comments received on 19 April 2022 in regards to the *Building Specific Work Plan Addendum, 811 East Arques Ave, Sunnyvale, California* submitted 17 March 2022. Responses to comments follow in table format.

EPA Comments – 19 April 2022	Locus Response – 8 June 2022
1. Contaminant volatilizing from a groundwater source migrates in all directions in the vadose zone including areas that are hydraulically upgradient. According to that, the following statement on Section 2.2, page 14, should be revised for accuracy: "*Higher concentrations of TCE are located at the north end of the Property near the historical source, however because the current building is hydraulically upgradient of this area, those concentrations are not expected to impact VI levels in the building*".	The Section 2.2 text has been revised to add distance between source area (the mound) and the building (approximately 300 feet). The text has also been revised from "not expected to impact VI levels..." to "concentrations are expected to have limited impact on VI levels..."
2. Section 3.3. page 17. It is indicated that the building foundation was constructed with a moisture barrier under the concrete slab. Clarify if the subslab implants installation could break through this barrier and how that could be affected or repaired.	Comment #2 has been addressed in Section 5 (Sampling Plan). It has been acknowledged that the sublab vapor pin implants will penetrate the slab and moisture barrier. The SOP will describe potential repairs when the vapor pins are decommissioned (see related comment #5a).
3. Section 3.5.1. page 17. Include a description of the sewer and its depth below ground. Discuss if it is expected that the sewer line could be below the water table at any location across the site.	The requested description has been added. Based on City of Sunnyvale utility maps, the sewer line is expected to below water table where the property and City sewer intersect.
4. Section 4.2.2, page 23. include unsealed utility penetrations, floor drains and impacted sewer lines as potential migration pathways.	Section 4.2.2 has been revised as suggested.
5. Section 5. page 27 a. Include in the main text a summary description of subslab installation and sampling procedures and attached to the document the SOPs for these procedures. Sampling flow rate should not exceed 200 mL/min. Leak test using a shroud and a tracer gas should be implemented. Examples of tracer gas that are commonly used for leak test are DFA and helium. b. Replace the six-liter summa canister by 1 liter summa canister (or lower volume). It is recommended to use smaller volumes for canisters as the sampling flow rate should not exceed 200 ml/min and a leak	5a. The main text in Section 5 has been revised as suggested. SOPs have also been added to the Appendix. 5b. One-liter summa canisters will be used as suggested. The Section 5 text has been revised accordingly. 5c. A second sampling event has been added and the Section 5 text revised accordingly. 5d. The EPA VISL calculator was used to update Table 4 for soil gas. 5e. Five additional subslab sampling vapor pins will be added as suggested.

	test using a shroud should be performed. Large volume canisters should be avoided as it would imply long time for sampling based on the recommended flow rate. c. It is recommended that each proposed sampling location be sampled twice to evaluate temporal variability. Clarify if the vapor ports will be secured in place to allow for a second round of sampling. d. Table 3 presents "indoor air quality evaluation criteria", since this report is about subsurface sampling, replace that table or include another table for the evaluation criteria of the subsurface soil gas. EPA recommends using the VISL (vapor intrusion screening levels) for screening purpose and to define laboratory detection limits and associated QA/QC relative to soil gas. e. Include five additional subslab sampling locations as indicated by the red stars in slide 4 of the pdf file attached. Two locations on the north side that is closest to the source area. Two locations on the west side for spatial coverage. The fifth additional subslab location should be in the women restroom not identified in the layout figure provided. f. Include the collection of a grab sample from each of floor drains observed in the janitor closet and men/women restrooms g. If sewer is expected to be below water table across the site, include collection of a grab sample from a sewer cleanout. h. Please indicate the north direction in each figure provided in the report, particularly if they are not oriented to the same direction.	The Section 5 text has been revised accordingly 5f. Locus is concerned that grab samples from the floor drain may draw ambient air that may be impacted by other sources in the building, making results difficult to interpret. The stated floor drains discharge to a 4" waste line that has multiple clean outs. It is proposed to sample an outdoor sewer cleanout in lieu of indoor grab samples (see related comment 5g). 5g. Because the main sewer is expected to be below water table and the Property lateral could be a migration pathway, a grab sample from a sewer line cleanout will be collected. Ideally, a cleanout outside the building will be used, however the location is subject to Lowe's approval. 5h. The figures were revised as suggested.

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If you have any questions regarding this correspondence, please call me at (415) 799-9937.

Sincerely,

J. Wesley Hawthorne, PE, PG
President

JWH/al

cc (via email): Shau-Luen Barker, Philips Semiconductors